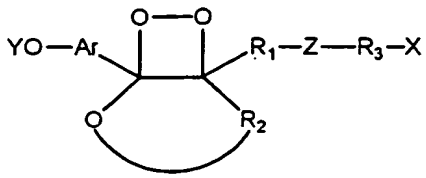
ABSTRACT OF THE DISCLOSURE

A 1,2-dioxetane derivative of the formula (I):



(I)

wherein Ar is an aryl group which may have an alkyl group, an aryl group, a halogen atom, an alkoxyl group, a carboxyl group, a formyl group, an alkyl ester, an aryl ester, an alkylketone, an arylketone or a hetero ring bonded thereto, X is a substituent capable of labeling an organic compound or a biological molecule, or an ester, Y is a hydrogen atom, an acyl group or a group of the formula $-Si(R_4R_5R_6)$ (wherein each of R_4, R_5 and R_6 which are independent of one another, is an alkyl group or an aryl group), Z is an alkyl group, an aryl group, an oxygen atom, a sulfur atom, a carbonyl group, -(CO)-O-, -O-(CO)-, -NH-, -NH-CO-, -CO-NH-, $-OSi(R_7R_8)-$ (wherein each of R_7 and R_8 which are independent of each other, is an alkyl group or aryl group) or a group of the formula $-(R_9R_{10})SiO-$ (wherein each of R_9 and R_{10} which are independent of each other, is an alkyl group or an aryl group), each of R_1 and R_2 is an alkyl group or an aryl group, and R_3 is a spacer.